X-Ref™

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X-Ref™
Loudspeaker Series
User Manual

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Emotiva X-Ref Series premium loudspeakers

Contents

Introduction

Thank you for purchasing Emotiva X-Ref Series premium loudspeakers.

The X-Ref Series, designed in cooperation with renowned loudspeaker designer Vance Dickason, represents the culmination of years of research into optimized loudspeaker design. With the X-Ref Series, you are getting advanced design, premium features, quality construction, and superb sound. All of the members of the X-Ref Series share the same basic features, including our exclusive low-resonance 1” silk dome tweeter for crystalline highs, proprietary blended-pulp cone mid/woofers for smooth midrange and bass performance, and sophisticated multi-pole asymmetrical crossover to ensure a seamless transition between elements. Critically braced MDF enclosures, dressed in our furniture-grade, 6-layer, black satin lacquer finish, with an attractive removable grill complete the picture. The X-Ref Series currently consists of ten models, all voiced to work perfectly together in a stereo or home theater setup that will sound far better than you ever imagined possible for such a modest price. We trust you’ll be as impressed with our achievement as we are - and hope you enjoy listening to these as much as we enjoyed designing them and bringing them to you.

The X-Ref Series of loudspeakers are designed to provide satisfying full-range sound. If, however, you decide you need more powerful and even more extended bass response, Emotiva offers the X-Ref series of DSP Powered Subwoofers. The X-Ref subs are optimized to perfectly complement the X-Ref family of speakers, blending seamlessly with them and delivering the final lowest octaves effortlessly and with absolute authority and precise control.

Of course we also humbly suggest that you consider pairing your Emotiva X-Ref Series loudspeakers with a set of our exceptional sounding, yet reasonably priced, source components and power amps.

Happy listening!

The Emotiva Team

About This Manual

This manual will provide you with all the information you need to achieve great performance, accurate sound, and many years of reliable service from your X-Ref Series speakers.

We suggest that you read through the entire manual; we kept things as short and direct as possible. Even if you're an expert user, you will probably find some interesting information and useful suggestions.

If you're really in a hurry to get started, please read the Quick Start section (on page 8); you may then read the remainder of the manual at your leisure.

You may wish to record serial numbers or other purchase information on the Notes page at the back of this manual.

Features

The Emotiva X-Ref Series of loudspeakers were designed to deliver premium performance and superior sound at a reasonable price. All members of the X-Ref Series are voiced to work perfectly together and share similar features, including:

- **Our Exclusive low-resonance 1" silk dome tweeter** for crystal clear highs and perfectly integrated midrange
- **Emotiva's specially designed long throw cone mid/woofers**; with proprietary blended-pulp cones, die-cast frames, butyl rubber surrounds, flat progressive-rate spiders, vented, copper-capped pole pieces, and aluminum shorting rings to ensure smooth low-distortion midrange and extended bass performance
- **A sophisticated multi-pole asymmetrical crossover**, which ensures a seamless transition between drivers and flawless performance in the critical midrange area
- **Premium parts, including low distortion air core inductors, precision metallized film capacitors, and oxygen-free copper wire** are used throughout for minimum distortion and coloration - even at high listening levels
- **Optimized voicing.** All Emotiva X-Ref models have been carefully voiced to not only sound superb as separate speakers, but to match perfectly and blend seamlessly with each other in any combination for both stereo and multi-channel configurations. (If you decide to add one or more subwoofers, the X-Ref DSP Powered Subwoofers have also been optimized to work flawlessly with the X-Ref Series of loudspeakers.)
- **A critically braced MDF enclosure** for minimum coloration, so all you hear is the music (1" MDF on front and rear panels of larger models, full 3/4" everywhere else)
- **A furniture grade 6-layer black satin lacquer finish** that fits well with any room decor and resists fingerprints
- **Removable grills** for driver protection and great looks
- **Emotiva's usual combination** of superlative engineering, high quality parts and manufacturing, excellent support, and a 5 year transferable warranty, along with our commitment to deliver great products at reasonable prices

Additional features of specific members of the X-Ref Series include:

- **Ported design for extended low-frequency response**
- **Integral decorative bases**, add visual appeal and improve stability. Detachable carpet spikes are included for us on soft surfaces.
- **Nested Array™ driver alignment** for enhanced off-axis frequency response and minimal lobing
- **Separate terminals for bi-amping or bi-wiring**

You can find more information about Emotiva's X-Ref Series on our Web site at http://www.emotiva.com

Unpacking

Your X-Ref Series loudspeakers were carefully packed and should reach you in perfect condition. If you notice any shipping damage or other issues when you unpack them, please contact Emotiva immediately.

Gently remove your X-Ref loudspeakers from the packing carton and remove all wrappings and shipping material. Avoid pressing directly on the front of the drivers or dropping any bits of packing material into the port opening.

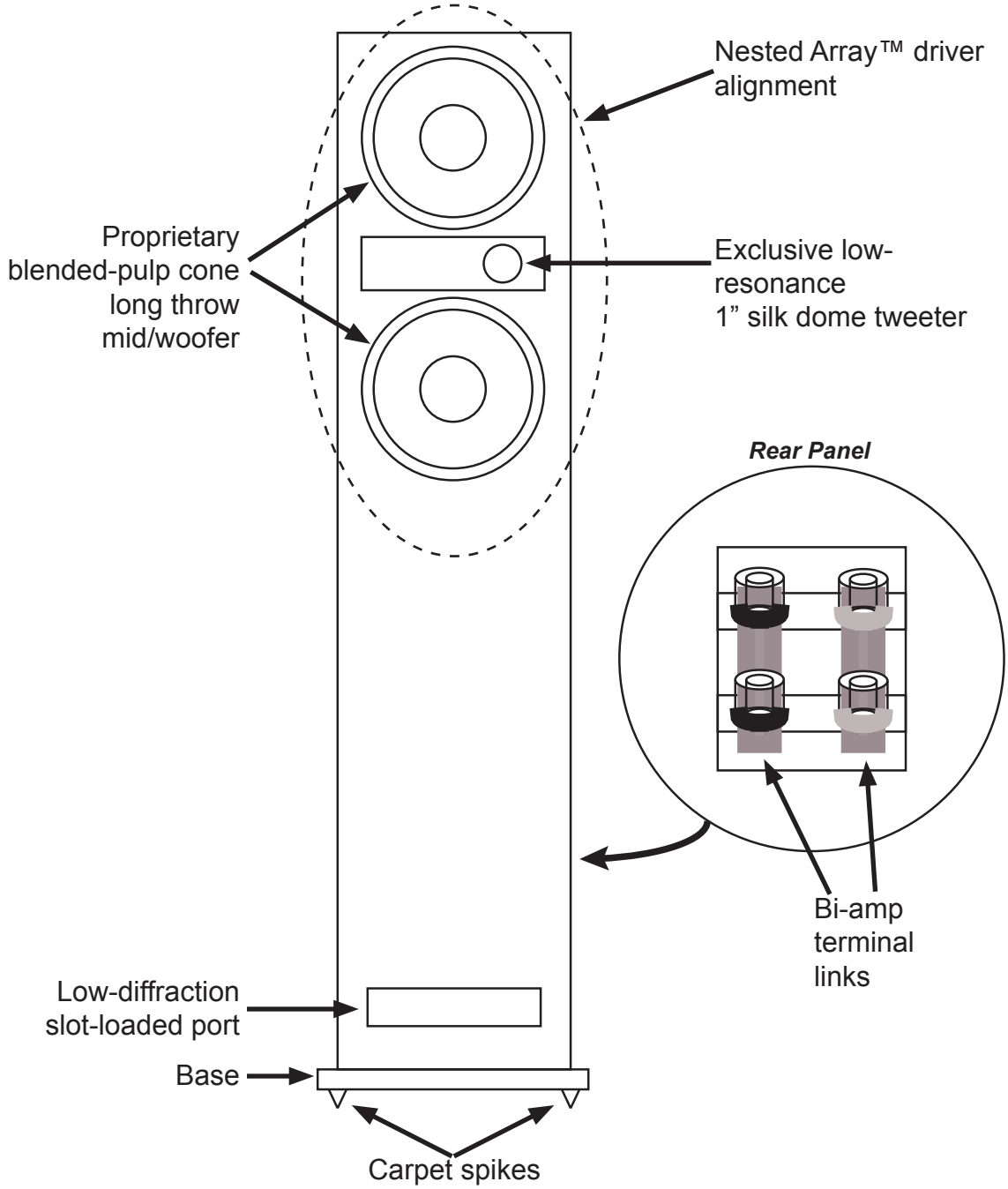
It is important to save the box and all packing materials in case your X-Ref speakers ever need to be moved or shipped back to the factory for service.

Please keep your sales receipt in a safe place. It is the easiest way to verify your purchase date for warranty purposes, and may also be required if you ever have to file an insurance claim.

We truly value customer feedback and would like to hear from you.

The X-Ref Series Loudspeaker

(model shown is the XRT-6.2 Tower)



Quick Start

To get the most from your X-Ref loudspeakers, we urge you to read the entire manual. If you just can't wait to hear how great your X-Ref loudspeakers sound, this section will cover the basics you need to get started.

- Find a secure location for your X-Ref loudspeakers.
- Before using the X-Ref Tower models, attach the base plates with the included screws. If you're using them on a soft surface (like carpet), we strongly suggest using the carpet points (also included).
- If you're using the X-Ref Center/LCR Monitors vertically (as monitors or mains), place them on speaker stands, *strong* shelves, or other secure locations. Consider using decoupling pads to reduce vibration and prevent slipping.
- If you're using your X-Ref Center/LCR Monitors as Centers, we suggest using the (optional) center stands offered by Emotiva. The stands are attractive, include foam pads to provide a secure non-slip base and protect against damage to the finish, and offer the option of tilting the speaker slightly up or down.
- Place the X-Ref Monitors on speaker stands or shelves, or attach them to mounting brackets of proper capacity.
- XRS Surrounds are typically placed on shelves or attached to rear or side walls (using the included mounting plates).
- Connect your X-Ref Series speakers to your power amp or receiver using good quality speaker cables.
- Find some music you *really* like to listen to.
- Enjoy!

While you're enjoying your X-Ref speakers, it would be a great time to read the rest of the manual to learn more about them.

Preparation

Attaching the base (XRT Tower models only)

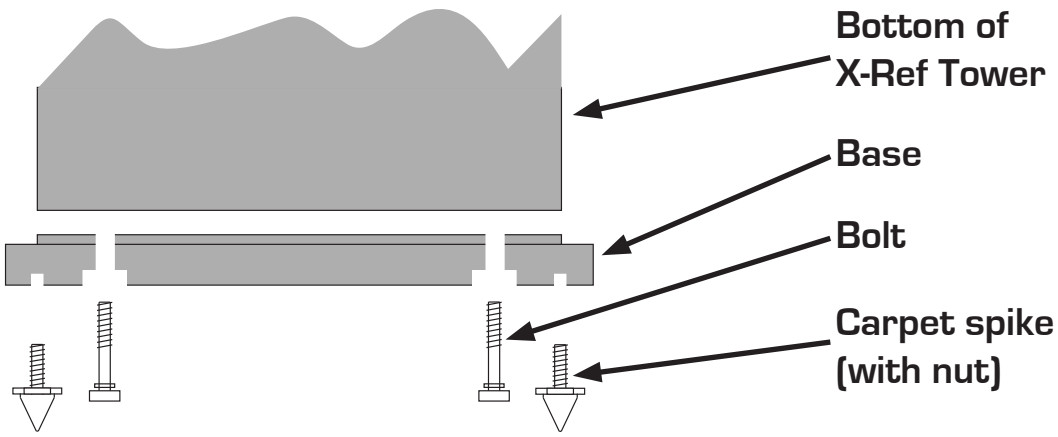
Each X-Ref Tower model ships with an attractive base. The base is not only decorative, but makes the X-Ref Towers much more difficult to tip over, and provides a mounting place for the included carpet spikes if you choose to use them. We *strongly* urge all X-Ref Tower owners to use the bases.

Position the base with the raised center area facing the speaker (with the side of the base with the countersunk holes away from the speaker); insert and tighten the four bolts (included).

If your X-Ref speakers are to be placed on a hard level surface (like a wood floor), use only the bases. (You may add felt or rubber stick-on feet at the corners if you prefer).

If your X-Ref loudspeakers are to be placed on a soft surface (like carpet), or an irregular surface (like rough concrete), the included carpet spikes should be inserted into the four holes near the corners of the base. The spikes provide additional stability on soft surfaces and can be adjusted and locked (using the locking nut) to level the speaker on irregular surfaces.

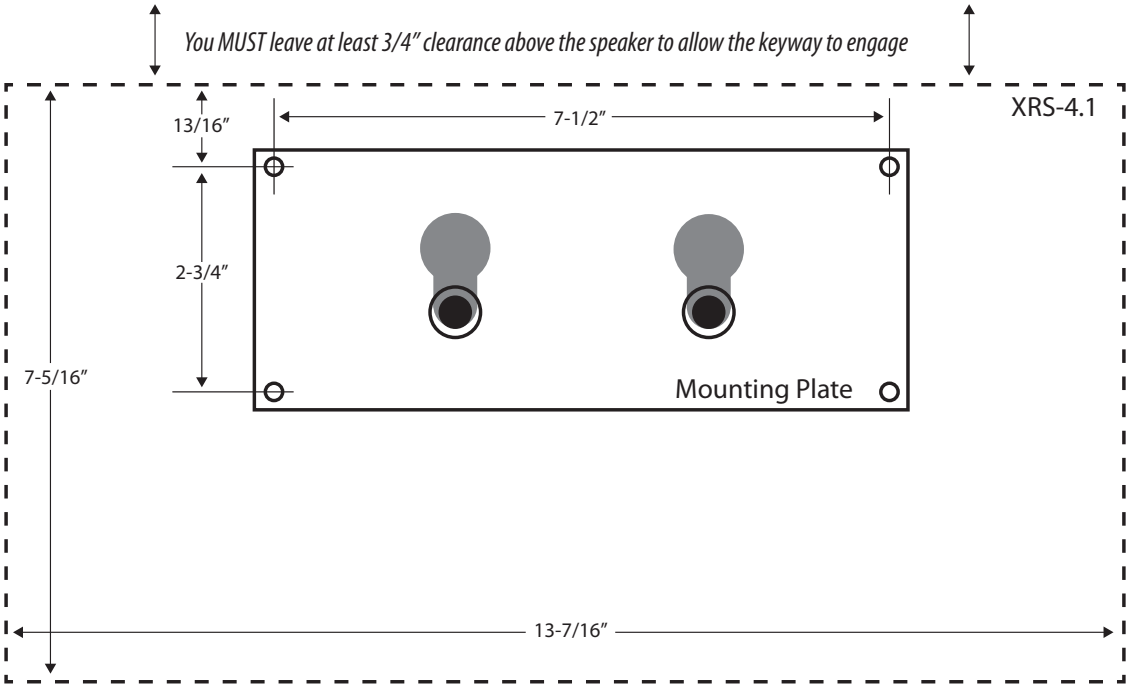
Note: The carpet spikes should NOT be used on finished flooring (like hardwood or linoleum) as they may damage the surface. If you wish to use the spikes for levelling on such a surface, you can purchase small metal "foot plates" on which to sit the spikes, or replace the spikes with special feet intended for delicate floors.



Attaching the mounting plate (XRS Surrounds only)

The X-Ref Surrounds can be wall-mounted using the convenient (and included) mounting plate. The mounting plate is attached to the wall with screws or drywall fasteners; two screws are then inserted into the back of the XRS Surround. Do NOT screw the screws fully into the back of the speaker; the screw heads must remain raised to engage the keyways in the plate. You then simply press the XRS against the mounting plate (so the screw heads on the XRS engage the keyway holes in the plate) and seat it downwards, locking the screws securely into the keyways.

Attach the mounting plate as shown in the figure below, with the raised side of the keyways and the foam pads away from the wall (and towards you).



Mounting dimensions for XRS-4.1

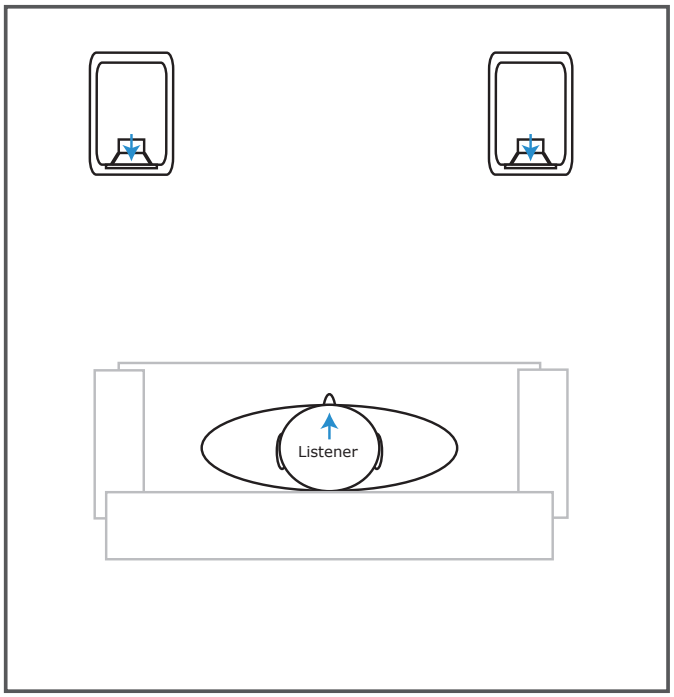
Speaker Placement

Speaker placement is often a compromise between optimum performance, personal preference, and site requirements. The following guidelines will serve as a starting point to help you decide where to place your X-Ref speakers to get the best sound. Remember that the “best” location is the one that works best for *you*, with *your* music, in *your* home. We suggest you read both of the following sections; advice about stereo speaker placement also applies to multi-channel systems and vice versa.

Positioning your X-Ref Series speakers for stereo operation

The X-Ref Tower models are intended to stand directly on the floor (with the included bases and carpet feet), and should not be placed on top of other objects, stands, or furniture.

The X-Ref Center/LCR Monitors, when used in stereo applications, should be placed vertically and symmetrically (with both tweeters offset either towards or away from the center). Ideally they should be mounted on stands, with the tweeter at approximately the ear height of the listener. (When mounted vertically, the XRC’s should not be tilted forward or backward.)



Positioning speakers for stereo operation

The X-Ref Monitors usually work best when placed on stands or strong shelves at a height which places the listener's ear level with the center of the speaker (between the tweeter and woofer). If your X-Ref Monitors are to be placed lower or higher than ear height, they may sound better if tilted slightly up or down. If placed above head height, you may achieve better results by mounting them upside down (tweeter towards the bottom).

The X-Ref Surrounds are intended to be used as surround speakers in home-theater configurations, but may also be used (probably in multiples) to provide background music to large areas. The X-Ref Surrounds may be placed on a shelf or attached to a wall using the (included) mounting plate.

All X-Ref Series speakers offer a smooth off-axis response, thus will sound good whether they are positioned to directly face the listener or to face directly forward. One option which often produces good results is shown in the figure on the previous page; place the speakers so that they form an equilateral triangle with the listener (the distance between the speakers is equal to the distance between each speaker and the listener), with both speakers facing directly forward, and with both tweeters offset towards the center.

The following are a few tips that might help you choose the perfect location for your speakers:

- For good imaging, always try to place speaker pairs in symmetrical locations (equidistant from side and back walls)
- Facing the speakers directly forward will tend to produce a wide sound stage; adding toe-in (so that the speakers directly face the listening position) will make the sound stage more focused
- Moving the speakers further apart, or positioning the tweeters towards the outside, will make the sound stage wider; positioning the tweeters towards the center will make the sound stage more focused
- Placing the speakers at least a few feet from front and side walls will usually improve imaging and smooth frequency response
- Placing speakers close to room corners will usually boost bass, but often at the cost of making the bass more boomy and less smooth
- If possible, try to make the room acoustically symmetrical from side to side; doing so will usually significantly improve imaging. (If you have something reflective, like a large window, on one side, have a large picture or bare wall on the other. If you have a large absorptive couch on one side wall, balance it with a tapestry on the opposite wall.)

If your setup includes an X-Ref DSP Powered Subwoofer (or a pair), please refer to the subwoofer's manual for suggestions about placement and configuration.

As we said before, there is no right or wrong, so experiment and find out what placement works best for you.

Positioning your X-Ref Series speakers for home theater use

Although the goal is always to achieve the best overall listening experience, because more speakers are required for home-theater than for stereo, you are more likely to encounter practical constraints on where they can be located. Various surround-sound systems and standards also recommend slightly different speaker placement for optimum performance.

When listening to most music, the surround speakers are primarily used for ambience information. In most movies, important and highly-localized information is present in the Left Front, Right Front, and Center (front) channels. The sound quality, voicing, and optimum placement of those speakers is, therefore, the most critical. While surround speakers must still be of good quality and must match the voicing of the main speakers to maintain proper imaging and a cohesive sound stage, there is much more latitude in terms of the type of speakers used for surrounds and how they are placed and configured.

In this section we will give you some suggestions for which speakers to use for each job, and where to place them. Please take these suggestions as starting points and try different variations to determine what works best for you. Neither our advice (nor anybody else's) should ever prevent you from doing what sounds best to you.

The X-Ref Tower models are intended to stand directly on the floor (with the included bases and carpet points), and should not be placed on top of other objects, stands, or furniture. They make great main Left Front and Right Front speakers.

The X-Ref Series Center/LCR Monitors are designed to work well both as Front Center speakers in a large system (with X-Ref Towers as front mains), or as Left Front, Center Front, and Right Front main speakers in a system where stand or shelf mounting are preferred. If you are using them as Left Front and Right Front main speakers, they should be placed vertically and symmetrically (with both tweeters offset either towards or away from the center). Ideally they should be mounted on stands, with the tweeter at approximately the ear height of the listener. (When mounted vertically, the XRC's should not be tilted forward or backward).

If you are using one XRC as a Center Front speaker, then it will probably be mounted horizontally either above or below your screen. Emotiva offers a high quality stand for supporting the XRC Center/LCR Monitors when they are mounted horizontally, which includes a foam pad to prevent damage to your XRC's finish, and applies a slight vertical tilt to the speaker. We suggest offsetting the tweeter upwards and tilting the XRC upwards when you position it below your screen, and offsetting the tweeter downwards and tilting the speaker downwards when mounting it above your screen.

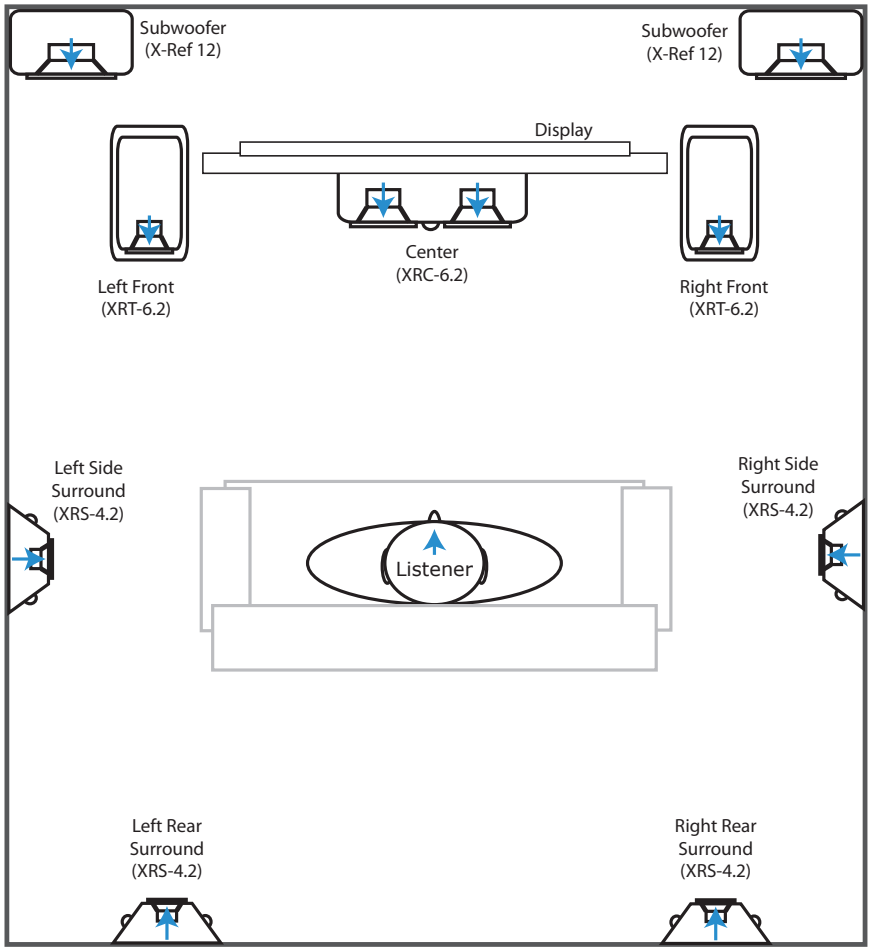
The XRC's can also be used as surrounds, in which case they can be mounter either vertically or horizontally. (If you mount them horizontally, try mounting them on shelves above head height. You can use the optional stands to point them down towards the listener for a more focused presentation, or up towards the ceiling for a more diffused ambience effect).

The X-Ref Monitors are typically placed on stands or strong shelves, at a height which places the listener's ear level with the center of the speaker (between the tweeter and woofer), and can be used as mains in a smaller system or as surrounds in a larger system. If your X-Ref Monitors are to be placed above or below ear height, they may sound better if tilted slightly up or down. If placed above head height, you may achieve better results by mounting them upside down.

The X-Ref Surrounds are intended to be used as surround speakers in home-theater configurations, but may also be used (probably in multiples) to provide background music to large areas. The X-Ref Surrounds may be placed on shelves or attached to a wall using the (included) mounting plate.

If your setup includes an X-Ref DSP Powered Subwoofer (or a pair), please refer to the subwoofer's manual for suggestions about placement and configuration.

As we said before, there is no right or wrong, so experiment and find out what placement works best for you.



Positioning speakers for home-theater use

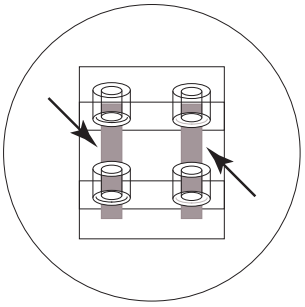
The figure on the previous page shows one suggested configuration for a fantastic surround-sound system. X-Ref XRT-6.2 Towers are used for the Front Left and Front Right speakers, positioned approximately in an equilateral triangle with the listening position, with the tweeters offset towards the center. An XRC-6.2 is used for the Front Center channel, placed on a stand on the shelf below the center of the screen, tilted upwards, with the tweeter offset towards the top. The Towers are positioned slightly forward of the center so the three front speakers form an arc with the listening position. XRS-4.1 Surrounds are used for all surround speakers. The Side Surrounds are wall-mounted to the sides of the listening position, and the Rear Surrounds are mounted near the sides along the back wall. All of the speakers are approximately the same distance from the listening position, which makes setup easier and often produces astounding results. We also added a pair of X-Ref 12 DSP Powered Subwoofers (the XRT-6.2's don't *need* subs, but they do make for an even more impressive home theater experience).

Connections

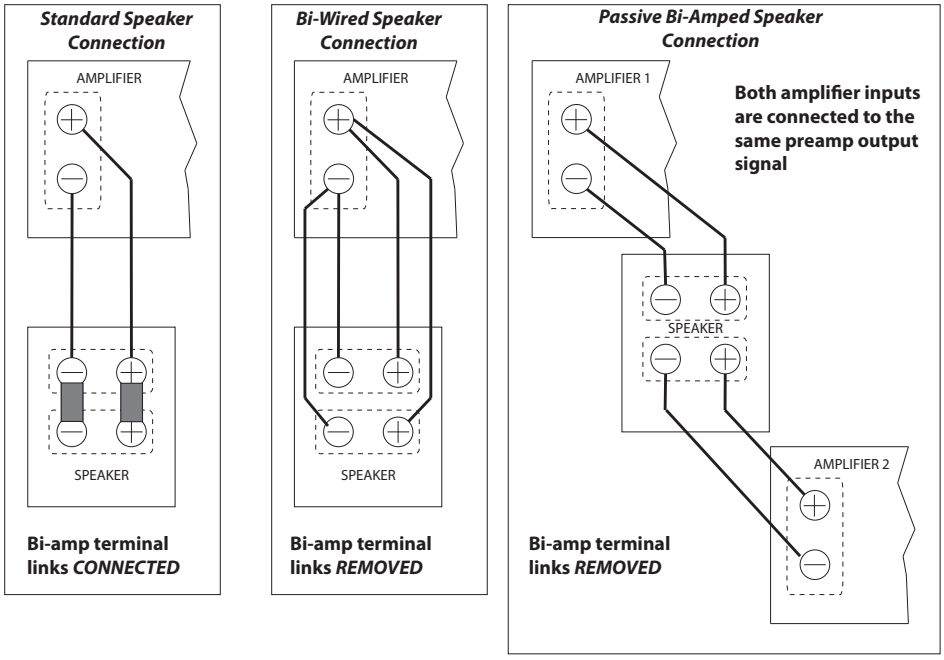
Connecting your X-Ref Series speakers to a power amp or receiver

Although the X-Ref Series speakers have no special connection requirements, the following suggestions may be helpful:

- Always use high-quality speaker wire of reasonable gauge (16 gauge or heavier)
- If you must use thinner wire, try to keep the length as short as possible
- Be careful to wire both (or all) speakers “in phase” (the plus/red terminal on each speaker to the plus/red terminal on your amp)
- Try to use wires of equal length and gauge for symmetrical pairs of speakers (don’t use a long 16 gauge wire for your Left Front and a short 10 gauge wire for the Right Front)
- If you use stranded cables, use care to avoid short circuits (from stray strands touching)
- Emotiva offers very high quality pre-made speaker cables at reasonable prices (you will find them in the Interconnects section of our website at www.emotiva.com)



X-Ref Series terminal plate (on rear panel) - showing bi-amp terminal links (REMOVE these links for bi-wiring or bi-amping)



Various types of common speaker connections (one channel shown)

Bi-wiring and passive bi-amping

Most X-Ref loudspeakers offer removable bi-amp terminal links. By removing these links, you can access the high-frequency and low-frequency sections of the speaker separately and take advantage of the improvements in sound quality offered by bi-wiring or passive bi-amping. Bi-wiring is when you use a single amplifier channel for each speaker, but run separate speaker wires from the amplifier to the high-frequency and low-frequency sections of the speaker. Bi-amping is when you use separate amplifiers to power the high-frequency and low-frequency section of each loudspeaker. Passive bi-amping means that the passive crossover for each section of the speaker remains in-circuit, and no line-level crossover is required between the preamp and power amps.

Bi-wiring your X-Ref Series speakers

Many listeners hear an improvement in sound quality when bi-wiring their loudspeakers. This improvement is likely to be more significant when long or thin speaker wires are required, and is more noticeable with some speakers and amplifiers than with others.

In a normally connected loudspeaker, a relatively large amount of current flows into each section of the speaker (usually much more to the low-frequency section). Since this current all shares a single wire from the amplifier to the speaker, and speaker wire has a low but finite resistance, the current flowing to each section of the speaker produces a measurable voltage drop in the wire, which in turn modulates the overall signal in the wire. So, when there's a lot of loud bass, it may modulate or distort the treble, and vice versa. Since the low-frequency portion of the speaker typically operates at much higher current levels than the high-frequency portion, yet distortion in the mid and high frequencies is typically more audible, the most common result is a noticeable muddying and blurring of critical midrange and high frequencies during heavy bass passages.

By providing separate paths for current flow from the amplifier to the high-frequency and low-frequency portions of the speaker, bi-wiring eliminates this interaction and the distortion it causes. While the differences may be subtle, bi-wiring is something that can be tried quite easily - and at minimal cost (as long as your speakers support it, all you need is a second set of speaker wires).

To bi-wire the X-Ref speakers, remove the bi-amp terminal links from the input plate on each speaker (shown in the figures on pages 7 and 16). Connect two sets of speaker wires to each amplifier output terminal, then connect one set to each pair of input terminals on the X-Ref speaker. Be sure that both sets of wires are connected "in phase" (the wires from the plus/red terminal on the amp to the plus/red terminals on both inputs of the speaker).

Note: Be sure to remove the bi-amp terminal links from the input terminals of the speakers when using your X-Ref speakers in a bi-wired configuration. Failure to do so will negate any positive effects of bi-wiring, and may cause damage to one or both amplifiers if hooked up incorrectly.

Passive bi-amping your X-Ref speakers

Bi-amping is when you use separate amplifiers to power the high-frequency and low-frequency section of each loudspeaker. Most listeners agree that bi-amping produces a significant improvement in sound quality. Because the load on each amplifier is reduced, and both the amplification and the high-current signal paths for the high-frequencies and low-frequencies are kept entirely separate, the result is cleaner sound. The X-Ref series speakers permit passive bi-amping, which means that the passive crossover for each section of the speaker remains in-circuit, and no line-level crossover is required between the preamp and power amps.

Implementing passive bi-amping for one pair of X-Ref speakers requires either two stereo amplifiers or four mono-block amps. For each loudspeaker, remove the bi-amp terminal links on the input plate (shown in the figures on pages 7 and 16), connect one power amp channel to the high-frequency section, and another to the low-frequency section. Connect both power amp channels for each speaker to the same audio input signal (if the preamp doesn't have dual outputs, a simple passive splitter can be used).

If four separate mono-block power amps are used, or if two stereo amps are used, it is generally recommended that they all be the same. Other configurations (some using different amps) are possible, but they are beyond the scope of this manual. If you have specific questions about various options, Emotiva Technical Support will be glad to help you.

Caution: Be sure to remove the bi-amp terminal links from the input terminals of the speakers when using your X-Ref speakers in a bi-amplified configuration. Failure to do so will PROBABLY result in damage to one or both amplifiers.

Note: When implementing passive bi-amping on a system with bass management, DO NOT use the bass management feature of your preamp or pre/processor to divide the audio spectrum between your bi-amp power amps; both power amps for each speaker should receive THE SAME AUDIO SIGNAL.
(In a system without a subwoofer, both amps should receive the same full-range signal; in a system with bass management that includes a subwoofer, the subwoofer will receive the low-pass filtered output and BOTH power amp channels for each speaker will receive the same high-pass filtered signal intended for the "main" speaker for that channel).

Configuration

All of the X-Ref Tower and Center/LCR Monitor speakers are designed to be used full-range (although smaller members are limited in their maximum low-frequency output). The X-Ref Surrounds are, obviously, intended to be used mainly as surround speakers in a multi-channel system.

If using your X-Ref loudspeakers in a stereo system with bass management and one or more subwoofers, choose a crossover point that works well in your room.

If using your X-Ref loudspeakers in a multi-channel home theater system, the Tower models should be set as “large” and the X-Ref Surrounds should be set as “small”. For the other models you should try “large” or “medium” and see which works best for you (if prompted, the X-Ref Surrounds are bipoles).

Care and Maintenance

Periodic Maintenance

Your X-Ref loudspeakers require no periodic maintenance or calibration.

Cleaning the Cabinet and Baffle

- The cabinets of the X-Ref loudspeakers should normally be cleaned with a rag dampened with plain water. **DO NOT** spray water directly onto or into the speaker and **DO NOT** use abrasive or chemical cleaners. Gently dry the surface with a clean soft rag after cleaning.
- If necessary, use a mild detergent, wipe the surface with a rag dampened with plain water afterwards to rinse it, and then gently dry the surface with a clean soft rag.
- If something nasty does get on the sides or top of your X-Ref speaker, use a rag dampened with a weak solution of dish detergent or other mild cleaning liquid, followed by a rag dampened with plain water, and then dry with a clean rag.

Cleaning the Grill Cloth

- If necessary, the grill cloth may be carefully vacuumed to remove dust or hair.
- Animal hair may be removed by using a “tape” type lint remover or soft brush. Avoid using brushes with stiff bristles that may pull or damage the grill cloth.

Note: DO NOT use any sort of liquid or wet cloth on the mid/woofer cone, and avoid touching the tweeter dome with either your fingers or any sort of cleaning cloth or brush. DO NOT use a vacuum to clean the mid/woofer cone or tweeter dome.

Specifications

X-Ref XRT-6.2 Tower

Frequency response:
40 Hz to 22 kHz +/- 2.5 dB

Efficiency / Impedance:
88 dB/2.83V/1m; 4 ohms

Input connectors:
5-way binding posts (gold plated with clear insulating covers)
(two sets connected with terminal links - removable for bi-wiring or bi-amping)

Driver complement:
Two 6.5” blended-pulp cone mid/woofers
One 1” silk dome tweeter

Bass alignment:
Single front-oriented low-diffraction slot-loaded port

Crossover:
Crossover type: Multi-pole, asymmetrical
Crossover frequency: 2700 Hz

Size and weight:
Size (each): 40” high x 8.5” wide x 15” deep (41.75” x 10.5” x 17” with base)
Size (each; packaged): 49” high x 23” wide x 18.5” deep
Weight (each;net): 55.2 lbs
Weight (each;packaged): 71.9 lbs

X-Ref XRT-5.2 Tower

Frequency response:
49 Hz to 22 kHz +/- 2.5 dB

Efficiency / Impedance:
86 dB/2.83V/1m; 4 ohms

Input connectors:
5-way binding posts (gold plated with clear insulating covers)
(two sets connected with terminal links - removable for bi-wiring or bi-amping)

Driver complement:
Two 5.25” blended-pulp cone mid/woofers
One 1” silk dome tweeter

Bass alignment:
Single, front-oriented, low-diffraction slot-loaded port

Crossover:
Crossover type: Multi-pole, asymmetrical
Crossover frequency: 2700 Hz

Size and weight:
Size (each): 36.5” high x 6.5” wide x 9.5” deep (38.5” x 8.5” x 9.5” with base)
Size (each; packaged): 45.25” high x 15.5” wide x 17.5” deep
Weight (each;net): 31 lbs
Weight (each;packaged): 45.6 lbs

X-Ref XRC-6.2 Center/LCR Monitor

Frequency response:
45 Hz to 22 kHz +/- 2.5 dB

Efficiency / Impedance:
87 dB/2.83V/1m; 4 ohms

Input connectors:
5-way binding posts (gold plated with clear insulating covers)
(two sets connected with terminal links - removable for bi-wiring or bi-amping)

Driver complement:
Two 6.5” blended pulp cone mid/woofers
One 1” silk dome tweeter

Bass alignment:
Dual, front-oriented, low-diffraction slot-loaded ports

Crossover:
Crossover type: Multi-pole, asymmetrical
Crossover frequency: 2700 Hz

Size and weight:
Size (each): 8” high x 22” wide x 13” deep
Size (each; packaged): 14” high x 26.75” wide x 19” deep
Weight (each;net): 33 lbs
Weight (each;packaged): 40.2 lbs

X-Ref XRC-5.2 Center/LCR Monitor

Frequency response:
74 Hz to 22 kHz +/- 2.5 dB

Efficiency / Impedance:
87 dB/2.83V/1m; 4 ohms

Input connectors:
5-way binding posts (gold plated with clear insulating covers)
(two sets connected with terminal links - removable for bi-wiring or bi-amping)

Driver complement:
Two 5.25” blended-pulp cone mid/woofers
One 1” silk dome tweeter

Bass alignment:
Sealed acoustic suspension

Crossover:
Crossover type: Multi-pole, asymmetrical
Crossover frequency: 2700 Hz

Size and weight:
Size (each): 6.5” high x 19.5” wide x 8.5” deep
Size (each; packaged): 11.75” high x 23.25” wide x 12.75” deep
Weight (each;net): 17.4 lbs
Weight (each;packaged): 21.2 lbs

X-Ref XRM-6.1 Monitor

Frequency response:
63 Hz to 22 kHz +/- 2.5 dB

Efficiency / Impedance:
86 dB/2.83V/1m; 4 ohms

Input connectors:
5-way binding posts (gold plated with clear insulating covers)

Driver complement:
One 6.5” blended pulp cone mid/woofer
One 1” silk dome tweeter

Bass alignment:
Single, front-oriented, low-diffraction slot-loaded port

Crossover:
Crossover type: Multi-pole, asymmetrical
Crossover frequency: 3000 Hz

Size and weight:
Size (each): 14.75” high x 8” wide x 10.5” deep
Size (pair; packaged): 20.5” high x 16.5” wide x 23” deep
Weight (each;net): 19.6 lbs
Weight (pair;packaged): 47.7 lbs

X-Ref XRM-4.1 Monitor

Frequency response:
100 Hz to 20 kHz +/- 3 dB

Efficiency / Impedance:
85 dB/2.83V/1m; 5 ohms

Input connectors:
5-way binding posts (gold plated with clear insulating covers)

Driver complement:
One 4” blended pulp cone mid/woofer
One 1” silk dome tweeter

Bass alignment:
Single, front-oriented, low-diffraction slot-loaded port

Crossover:
Crossover type: Multi-pole, asymmetrical
Crossover frequency: 3000 Hz

Size and weight:
Size (each): 8.75” high x 5.5” wide x 6.5” deep
Weight (each;net): 7 lbs

X-Ref XRS-4.1 Surround

Frequency response:
100 Hz to 18 kHz +/- 3 dB

Efficiency / Impedance:
85 dB/2.83V/1m; 5 ohms

Input connectors:
5-way binding posts (gold plated with clear insulating covers)

Driver complement:
One 4” blended pulp cone mid/woofer
One 1” silk dome tweeter

Bass alignment:
Single, front-oriented port

Surround type:
Bipole

Crossover:
Crossover type: Multi-pole, asymmetrical
Crossover frequency: 3000 Hz

Size and weight:
Size (each): 7.25” high x 13.5” wide x 7” deep
Size (pair; packaged): 12” high x 18” wide x 17” deep
Weight (each;net): 7.4 lbs
Weight (pair;packaged): 20.6 lbs

Troubleshooting

The X-Ref loudspeakers are carefully designed and manufactured using only high-quality precision components to ensure years of trouble-free operation. It's unlikely you'll ever have any problems with your X-Ref loudspeakers, but if you do, here are a few things you should try:

Problem: No output at all from one speaker

- Verify that your speaker cable hasn't become disconnected or shorted
- Verify that your source is working (by connecting the speaker to a different channel)
- Remember that, with surround-sound systems, not all speakers will play in certain decoder modes and with certain types of content

Problem: Very little bass or very poor imaging (usually from front speakers)

- Verify that all speakers are connected in proper phase (red/plus terminal from each speaker should be connected to red/plus terminal on each power amp channel). If one or more speakers are connected in incorrect phase, the most obvious result will usually be poor imaging and loss of bass. Surround speakers may be deliberately connected out of phase with other speakers, but Left Front, Center Front, and Right Front speakers should *always* be in phase with each other. Pairs of surrounds (both side surrounds or both rear surrounds) should be in phase with each other even if they are out of phase with other speakers.

Problem: Intermittent sound or odd sound from one speaker

- Verify that the speaker cable isn't frayed, shorted, or loose
- If your speaker cables have banana plugs, verify that they are fully inserted and fit tightly in the connector.
- Verify that your source is working (by connecting the speaker to a different channel)

Problem: No sound or intermittent sound from one driver (mid/woofer or tweeter) in one speaker

- Verify that your source is working (by connecting the speaker to a different channel)

If the problem persists, please contact Emotiva Technical Support (where a real live human will be glad to help you) at:

615-790-6754 | 877-EMO-TECH (877-366-8324)
Monday through Friday 8am - 5pm (Central Standard Time)

Emotiva Audio Corporation Limited Warranty

Emotiva Audio Corporation guarantees its products to be free from defective materials and/or workmanship and will replace defective parts and repair malfunctioning products under this warranty when the defect occurs under normal operation and use. For warranty service, the unit must be returned to our headquarters via pre-paid transportation with a copy of proof of purchase (i.e.: sales receipt). This warranty provides that the examination of the return product must indicate, in our judgment, a manufacturing defect. This warranty does not extend to any product which has been subjected to misuse, neglect, accident, improper installation, or where the serial number has been removed or defaced. Emotiva shall not be liable for incidental and/or consequential damages. This warranty gives you specific legal rights. This limited warranty is freely transferable during the term of the warranty period. The warranty on Emotiva products is not valid if the original factory serial number has been removed, defaced, or replaced in any way. Damage to, or loss of any software or data residing on the product, is not covered. When providing repair or replacement service, Emotiva, where applicable, will use reasonable efforts to reinstall the product's original software configuration and subsequent update releases, but will not provide any recovery or transfer of software or data contained on the serviced unit not originally included in the product.

Customers may have additional rights, which vary from state to state or from country to country. In the event that a provision of this limited warranty is void, prohibited, or superseded by local laws, the remaining provisions shall remain in effect. **The Emotiva Audio Corporation limited warranty is valid for a period of five (5) years from date of purchase in all countries.**

For any questions regarding the Emotiva Warranty, please contact Emotiva Audio Corporation at:

Emotiva Audio Corporation
135 SE Parkway Court
Franklin, Tennessee
37064
(615) 790-6754

customerservice@emotiva.com
www.emotiva.com

Note: The Emotiva Shipping Department WILL NOT accept equipment for service or repair without a valid Return Merchandise Authorization (RMA) number. Please call (615) 790-6754 to obtain an (RMA) number.

Contact Information

Emotiva Phone Numbers

615-790-6754 | 877-EMO-TECH (877-366-8324)
Monday through Friday 8am - 5pm (Central Standard Time)

Emotiva e-mail addresses

Online sales, product information, and general questions:

sales@emotiva.com

Customer service related inquires:

customerservice@emotiva.com

Technical support or service issues:

support@emotiva.com

Emotiva website

www.emotiva.com

Emotiva Shipping Address

Emotiva Audio Corporation

Attn: Customer Service
135 Southeast Parkway Court
Franklin, TN 37064

Note: To return items purchased through Emotiva for repair, warranty work, or refund you MUST call us at 1-877-EMO-TECH to obtain a Returned Merchandise Authorization (RMA) number.

Our Shipping Department will NOT accept packages unless they have a valid RMA number clearly indicated on the outside of the package. ALL returns must be in original packing materials (we'll send you new ones if you've lost or discarded yours), and should be addressed to "attn: Customer Service RMA xxxx" at the address above. You will find more details about the return process on our website (www.emotivapro.com), and our Technical Support department will be glad to help you.

Accessories

Speaker cables

Using high-quality speaker cables will ensure that you get the best sound quality and maximum reliability from your X-Ref loudspeakers. Emotiva Audio offers high-quality speaker cables that feature solid engineering, premium build quality, excellent performance, and reasonable cost (you will find them in the Interconnects section of our website at www.emotiva.com).

Center Stands for horizontal positioning

Emotiva offers a high quality stand for supporting the X-Ref Center/LCR Monitors when they are mounted horizontally, which includes a foam pad to prevent damage to your XRC's finish, and applies a slight vertical tilt to the speaker. The stands are finished in black lacquer and match the X-Ref Speakers perfectly.

Notes

Emotiva Audio Corporation
135 Southeast Parkway Court
Franklin, TN 37064
emotiva.com